nearly filled with mercury the broken end of the platinum wire was immersed in the liquid. To make a connection with the battery circuit it was simply necessary to insert a connecting wire into the sack containing the mercury. This makeshift has worked splendidly many times and there seems no reason why it should not work indefinitely. The sketch shows the arrangement above noted. *E,E,* are electrodes, *M,M,* mercury, *P,P,* the pockets.

The thought occurs to the writer that it would be possible to place on certain pieces of glass apparatus designed with fused-in-platinum wires some sort of glass pocket, the function of which would be the same as the leather pocket above mentioned. It is obvious that this arrangement would do away entirely with the risk of accident.

In the case of much glass apparatus where the electrodes are inserted through the glass the outer terminals are metal rings somewhat securely fixed in place—for example as in vacuum tubes. Even in electrolytic apparatus such a scheme may be used at times. Yet, while that arrangement is certainly an improvement over the projecting-out piece of platinum wire, it seems that the above scheme would lend itself to even more careless and safe handling.

It is further suggested that the same idea might be used on certain forms of vacuum tubes.

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THE TENTERTON STEEPLE AND THE GOODWIN SANDS

ON reading the reference to the Tenterton (Tenterden) Steeple and the Goodwin Sands in the article on "Heredity and Environment" by Mr. Henry Leffman,[1] I wondered whether the reference in question would be generally understood. I did not think so, and in order to test the matter I stated the reference and its connection in a meeting of some seventy high-school teachers, among whom were many A.B.'s, several A.M.'s and a sprinkling of Ph.D.'s. I asked those who understood the reference to raise a hand. The result was even more meager than I had anticipated—not a single hand went up.

Although most readers of the article referred to may have reached the conclusion which the author evidently took for granted they should reach, yet because the Goodwin Sands have recently been referred to in the war news from Dover (England)—the Sands are in that vicinity—and further because there may be some readers of SCIENCE who are still in the dark about the relation between the "Sands" and the "Steeple," therefore I thought that a brief account of the origin of the incident might not be altogether unprofitable.

In a "Compendium of English Literature" by Charles D. Cleveland, published at Philadelphia by J. A. Bancroft & Co., in 1869, may be found selections from the more prominent authors from Sir John Mandeville to William Cowper. On page 65 of this compendium a biographical sketch of Hugh Latimer is found, and following that are a few selections from his writings. One of the selections (p. 67) is entitled "Cause and Effect," and reads in part, as follows:

> Here is now an argument against the preachers. Here was preaching against covetousness all the last year, and the next summer followed rebellion. *Ergo,* preaching against covetousness was the cause of the rebellion—a goodly argument. Here now I remember an argument of master More's which he bringeth in a book that he made against Bilney; and here by the way I will tell you a merry toy.
>
> Master More was once sent in commission into Kent, to help to try out (if it might be) what was the cause of the Goodwin Sands, and the shelf that stopped up Sandwich haven. Thither cometh Master More, and calleth the country afore him, such as were thought to be men of experience, and men that could of likelihood best certify him of that matter concerning the stopping of Sandwich haven. Among others came in before him an old man, with a white head, and one that was thought to be little less than a hundred years old. . . . So master More . . . said: "Father (said he), tell me, if you can, what is the cause of this great arising of the sands and shelves about this haven, . . . [so] that no ships can arrive here? . . . ye of likelihood can say most to it, or at leastwise,

[1] SCIENCE, October 23, 1914, pp. 593–594.

more than any man here." . . . "Yea, forsooth, good master (quoth this old man), for I am well nigh a hundred years old. . . . [and] forsooth, sir, (quoth he), I am an old man; I think that the Tenterton-steeple is the Cause of the Goodwin Sands. For I am an old man, sir, (quoth he), and I may remember the building of the Tenterton-steeple, and I may remember when there was no steeple at all there. And before that Tenterton-steeple was in building, there was no manner of speaking of any flats or sands that stopped the haven, and therefore I think that the Tenterton-steeple is the cause of the destroying and decay of Sandwich haven." And so to my purpose, is preaching God's word the cause of rebellion, as the Tenterton-steeple was cause that Sandwich haven was decayed.

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SCIENTIFIC BOOKS

Roger Bacon. Essays contributed by various writers on the occasion of the commemoration of the seventh centenary of his birth. Collected and edited by A. G. Little. Oxford University Press, Oxford. 1914. Pp. viii + 426.

American universities and American scholars are fortunate in the undisputed right to celebrate the anniversaries of any of the great teachers that the world has known. Oxford has the first claim to commemorate the name and fame of Roger Bacon, for there the "learned doctor" spent many years, both as teacher and student. The committee on the commemoration of the seventh centenary of Roger Bacon's birth has erected a statue of Roger Bacon, by Mr. Hope Pinker, in the University Museum at Oxford, has issued the volume of memorial essays under discussion, and has raised funds for the publication of certain unpublished works of the great Franciscan. In America Columbia University has celebrated this anniversary with appropriate exercises, including a pageant; at the University of Michigan the Research Club devoted its annual memorial meeting to public exercises on Roger Bacon, with papers by Professors Dow, Lloyd, Guthe and Tatlock, discussing the life and times, the philosophy, the scientific activity and the relation to magic and astrology of Roger Bacon. The *Open Court Magazine* dedicated the issue of August, 1914, entirely to Bacon, and foreign journals, such as the *Revue des deux Monds*, have taken this time to discuss the contributions to various fields made by Bacon.

Simply the titles of the essays in the present volume, and the list of contributors, pay such a high tribute to the intellectual activity of Roger Bacon that it seems desirable to present the list of contents:

I. Introduction: On Roger Bacon's Life and Works. By A. G. Little, M.A., Lecturer in Paleography in the University of Manchester.

II. Der Einfluss des Robert Grosseteste auf die wissenschaftliche Richtung des Roger Bacon. Von Universitätsprofessor Dr. Ludwig Baur in Tübingen.

III. La Place de Roger Bacon parmi les Philosophes du xiii^e^ siècle. Par François Picavet, Secrétaire du Collège de France, Directeur à l'École pratique des Hautes-Études.

IV. Roger Bacon and the Latin Vulgate. By His Eminence Francis Aidan Cardinal Gasquet, D.D., O.S.B., President of the International Commission for the Revision of the Vulgate.

V. Roger Bacon and Philology. By S. A. Hirsch, Ph.D.

VI. The Place of Roger Bacon in the History of Mathematics. By David Eugene Smith, Professor of Mathematics, Teachers College, Columbia University.

VII. Roger Bacon und seine Verdienste um die Optik. Von Geheimer Hofrat Professor Dr. Eilhard Wiedemann in Erlangen.

VIII. Roger Bacons Lehre von der sinnlichen Spezies und vom Sehvorgange. Von Dr. Sebastian Vogl in Passau.

IX. Roger Bacons Art des wissenschaftlichen Arbeitens, dargestellt nach seiner Schrift "De Speculis." Von Dr. J. Würschmidt in Erlangen.

X. Roger Bacon et l'Horreur du Vide. Par Pierre Duhem, Membre de l'Institut de France, Professeur à l'Université de Bordeaux.